

ABSTRACT

A battery apparatus includes an anode terminal and a cathode terminal at least one of which includes a conductive extension extending through and contacting insulative housing material. The extension includes at least one outer rough surface characterized by a plurality of surface nodules at least a majority of which are at least 5 microns in height and have a maximum linear cross dimension of at least 20 microns and which contact and bond with the enveloping electrically insulative housing material. The battery apparatus can include a plurality of bicells. A method of forming a battery apparatus includes brushing an outer surface of at least one of an anode terminal material or a cathode terminal material effective to roughen the outer surface from what it was prior to the brushing. The anode and cathode assembly are enveloped in a housing comprising electrically insulative material with at least the one terminal material projecting therefrom.